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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,743	03/15/2004	Kazuhiro Masuda	119096	9229
25944	7590	06/09/2005		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER DICKY, THOMAS L	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/799,743	Applicant(s) MASUDA, KAZUHIRO	
	Examiner Thomas L. Dickey	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
     4a) Of the above claim(s) 10-15 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-9 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/15/04; 7/28/04</u> | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Applicant's election of Group II, claims 1-9 in the Paper filed 04/12/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Oath/Declaration***

2. The oath/declaration filed on 7/28/04 is acceptable.

### ***Drawings***

3. The formal drawings filed on 3/15/04 are acceptable.

### ***Priority***

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

5. The Information Disclosure Statements filed on 3/15/04 and 7/28/04 have been considered.

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***Specification***

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Swan et al. (2003/0210534).

Swan et al. discloses an electronic instrument comprising a circuit board comprising a semiconductor device comprising a substrate 12 and an electrode 34 formed on the substrate 12, wherein a through-hole 44 is formed through the electrode 34 and the substrate 12 in a stacking direction of the electrode 34 and the substrate 12, a conductive member 64-70 being inserted into the through-hole 44, wherein an insulating material 18-20 (the claimed insulating material being the vertically aligned portion of part 20) is disposed between the electrode 34 and the conductive member 64-70, the insulating material 18-20 including a wall portion located higher than at least the

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electrode 34, and wherein the conductive member 64-70 is formed over the wall portion of the insulating material 18-20 from the through-hole 44 and wherein the conductive member 64-70 is connected (the electrode 34 is connected to contact pad 16, note paragraph 0019, which in turn is connected to conductive member 64-70 through part 70) member 64 and electrode 34 with the electrode 34; wherein the insulating material 18-20 is formed (part 18) to cover an upper surface of the electrode 34 and a surface (part 20) in the through-hole 44, and includes a connection hole for connecting at least the electrode 34 with the conductive member 64-70 at a position differing (note paragraph 0019) from the through-hole 44, the wall portion 20 being disposed between the connection hole and the through-hole 44; wherein at least an interlayer dielectric 22 is formed between the substrate 12 and the electrode 34, the through-hole 44 being formed in the interlayer dielectric 22, and surfaces of the interlayer dielectric 22 and substrate 12 in the through-hole 44 are formed straightly in a boundary area, so as to have a level difference in a boundary area between the substrate 12 and the interlayer dielectric 22; wherein at least an interlayer dielectric 22 is formed between the substrate 12 and the electrode 34, the through-hole 44 being formed in the interlayer dielectric 22, and surfaces of the interlayer dielectric 22 and substrate 12 in the through-hole 44 are formed straightly in a boundary area between the substrate 12 and the interlayer dielectric 22; wherein the conductive member 64-70 functions as a connection terminal which secures electrical connection in an axial direction of the through-hole 44; and wherein a part 70 of the conductive member 64-70 projects outward from the through-

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hole 44 on a side of the substrate 12 opposite to a side on which the electrode 34 is formed. Note figures 1-6 and paragraphs 0016-0030 of Swan et al.

With regard to claim 7 Swan et al discloses a semiconductor device comprising a plurality 10,110 of the semiconductor devices as defined in claim 1 which are stacked, each of the semiconductor devices 10,110 being electrically connected through conductive member 64-70s 70,170. Note figures 6 and 7 and paragraphs 0028-0030 of Swan et al.

### ***Conclusion***

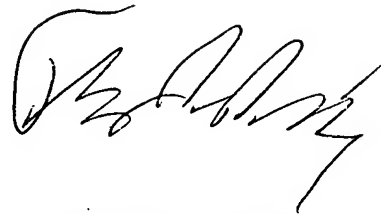
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thomas L. Dickey', is positioned above the printed name.

**Thomas L. Dickey**  
**Patent Examiner**  
**Art Unit 2826**  
**05/05**